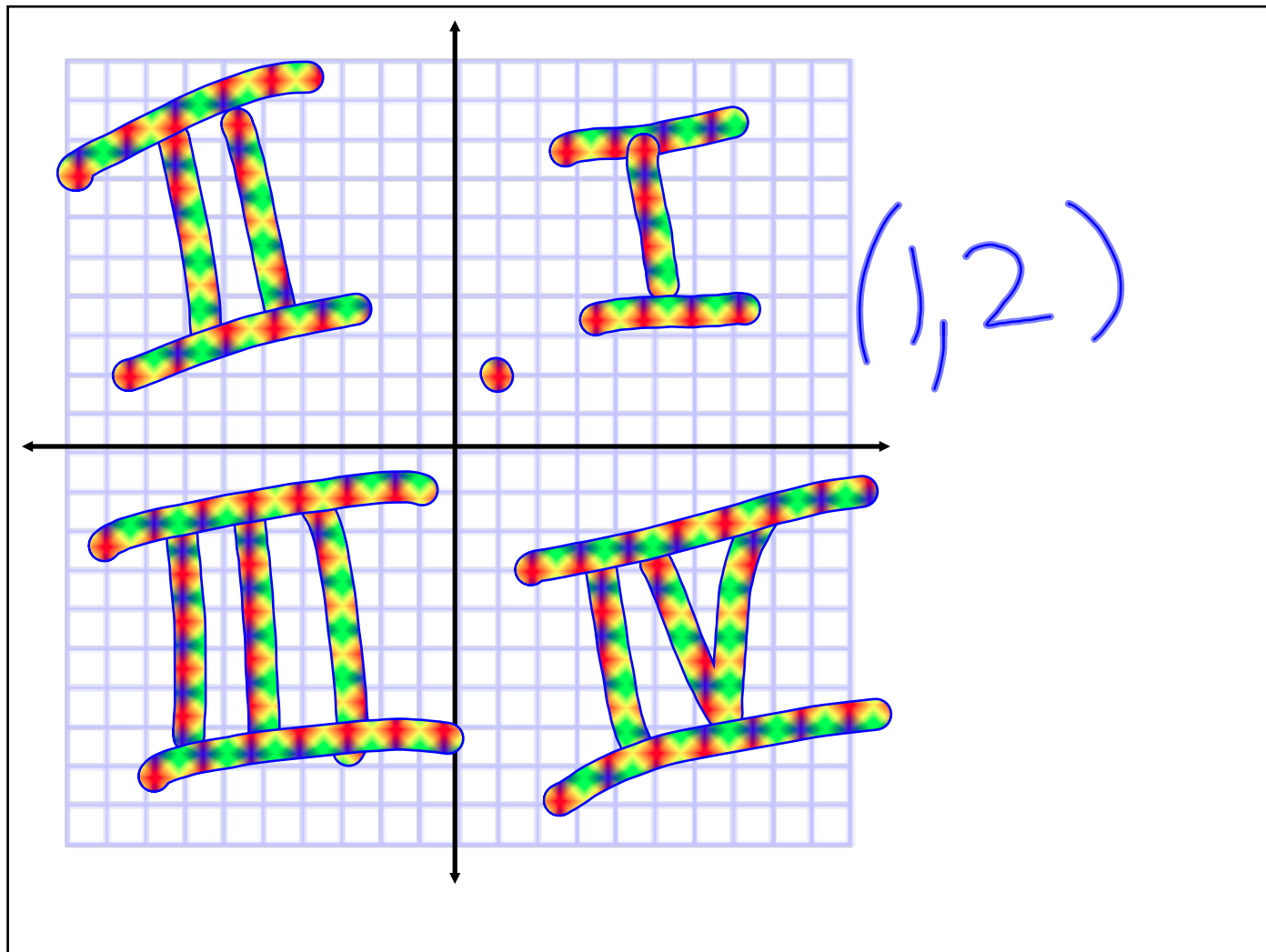


Graphing Linear Equations
Using X-Y Tables

$$y = 2x + 1$$



Rewrite in function form simply means, solve for y!
Let's practice that!

Rewrite each in function form.

1) $5x = y - 2$

1) $y = 5x + 2$

2) $\frac{3}{2}x + \frac{3}{2}y = \frac{3}{4}$

Handwritten work for problem 2:

- Blue arcs with "+2" above them connect the x and y terms to the right side.
- Blue numbers "4" and "2" are written next to the equation.
- Handwritten fractions: $\frac{3}{2} \cdot \frac{4}{1} = \frac{12}{2}$
- Blue equation: $6x + 6y = 3$
- Red equation: $-6y$

3)

3) $y = -x + 1/2$

Handwritten work for problem 3:

$$\frac{6y}{6} = \frac{-6x}{6} + \frac{3}{6}$$

$$y = -x + 1/2$$

Graphing Using X-Y Tables

Steps:

1 Rewrite the equation in function form, if necessary.

Solve for y

2 Make an X-Y table and use -2, 0, & 2 for the x-values.

3 Calculate the y-values.

4 Plot the points on the coordinate plane.

5 Use a straight edge to draw the line.

Checking Solutions

Check if a given ordered pair is a solution to the equation.

Simply substitute the x and y values from the ordered pair into the equation and see if it is true!

True = Yes, the ordered pair is a solution to the equation.

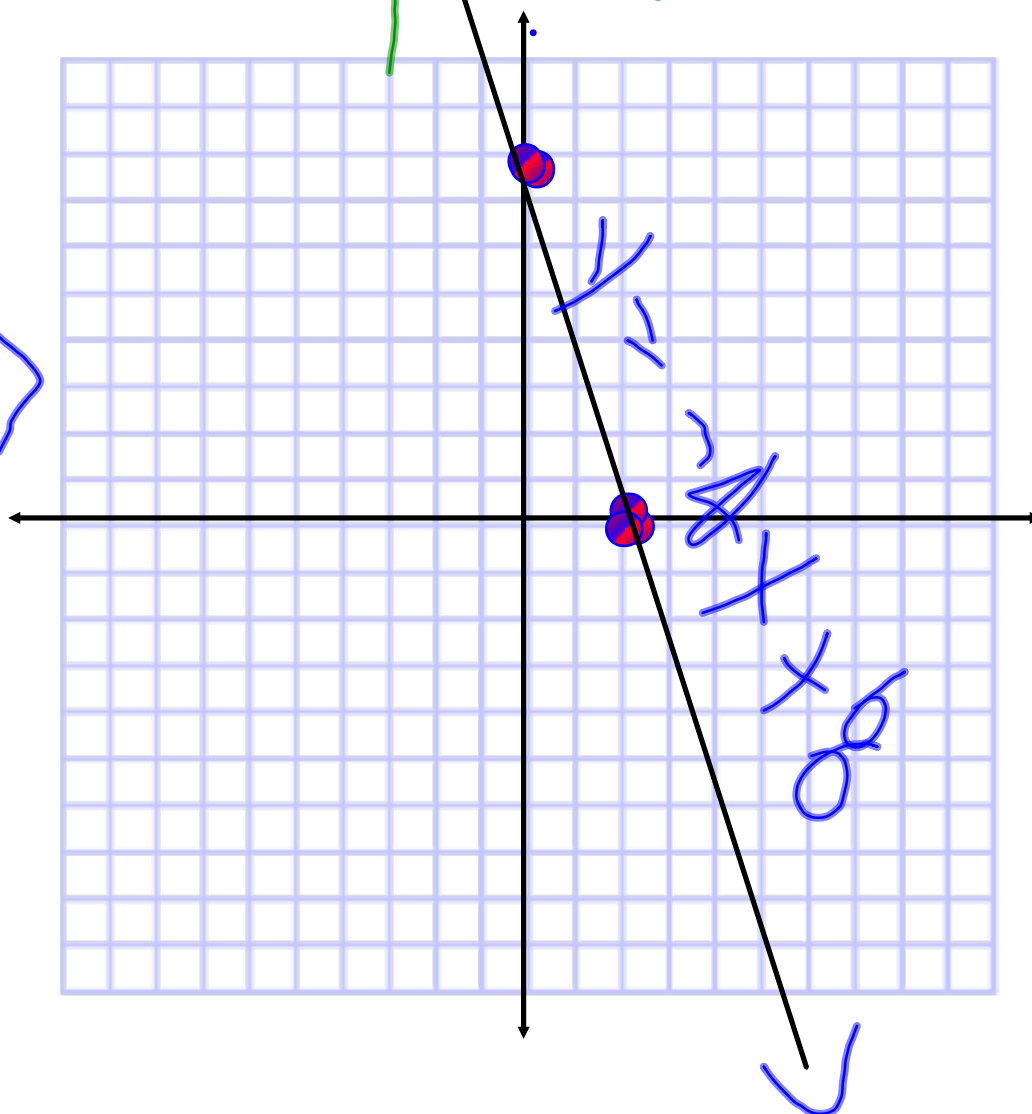
False = No, the ordered pair is not a solution to the equation.

Example 1: $6y - 3x = -9$, $(2, -1)$

Let's try this!

Example 2: $4x + y = 8$

x	y
-2	16
0	8
2	0



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Horizontal & Vertical Lines

Horizontal Lines will have an equation like $y = -3$.

< **The y (with no x term in the equation) tells us the line will be horizontal.**

< **The (-3) tells us where the horizontal line will cross the y -axis.**

< **When making an X-Y Table for a Horizontal Line, the Y Column gets filled in with the Y value given in the equation, you choose x values.**

Vertical Lines will have an equation like $x = 6$.

< **The x (with no y term in the equation) tells us the line will be vertical.**

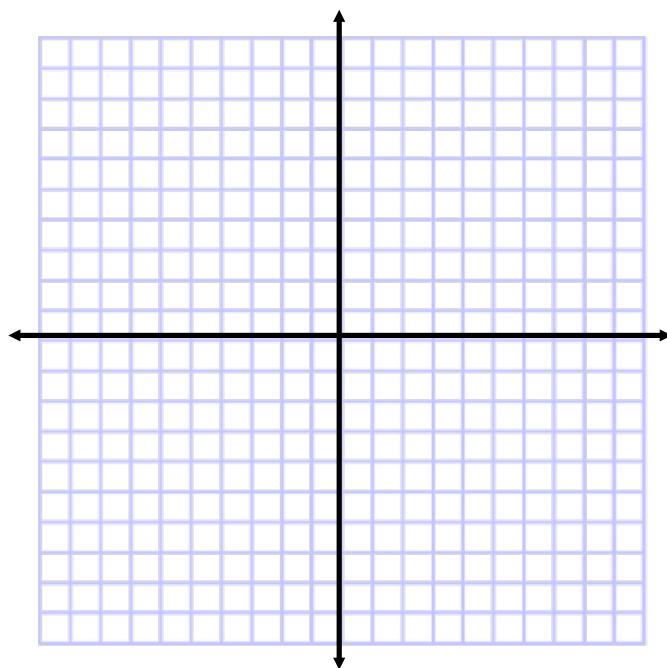
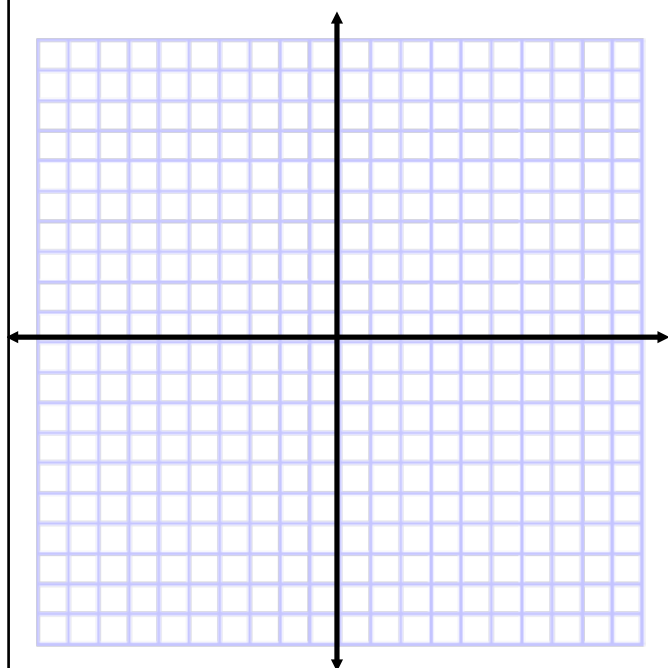
< **The 6 tells us where the vertical line will cross the x -axis.**

< **When making an X-Y Table for a Vertical Line, the X Column gets filled in with the X value given in the equation, you choose y values.**

Let's see you graph these bad boys!
Hint: Make the X-Y Table!

Example 3: $x = -3$

Example 4: $y = 4$



Get out your planner!